

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION**

WSOU INVESTMENTS, LLC d/b/a
BRAZOS LICENSING AND
DEVELOPMENT,

Plaintiff,

v.

MICROSOFT CORPORATION,

Defendant.

Civil Action No. 6:20-cv-454

Civil Action No. 6:20-cv-461

Civil Action No. 6:20-cv-465

PUBLIC VERSION

**MICROSOFT CORPORATION'S REPLY IN SUPPORT OF THE MOTION FOR
SUMMARY JUDGMENT OF PATENT INELIGIBILITY OF THE ASSERTED
CLAIMS IN U.S. PATENT NOS. 7,366,160, 8,274,902, AND 7,106,702**

TABLE OF CONTENTS

I. INTRODUCTION 1

II. THE '160 PATENT'S CLAIMS ARE NOT PATENT ELIGIBLE..... 1

 A. The '160 Patent Claims an Abstract Idea. 1

 B. The '160 Patent Claims Do Not Include an Inventive Concept..... 4

III. THE '902 PATENT'S CLAIMS ARE NOT PATENT ELIGIBLE..... 5

 A. The '902 Patent Claims an Abstract Idea. 5

 B. The '902 Patent Does Not Describe an Inventive Concept. 7

IV. THE '702 PATENT'S CLAIMS ARE NOT PATENT ELIGIBLE..... 8

 A. The '702 Patent Claims an Abstract Idea. 8

 B. The '702 Patent Does Not Describe an Inventive Concept. 9

V. CONCLUSION..... 10

LIST OF EXHIBITS

Decl. Ex.	Document Name	Abbreviation
Chen Decl. Ex. A (Dkt. No. 138-2, 454 Case)	U.S. Patent No. 7,366,160	'160 Patent
Chen Decl. Ex. B (Dkt. No. 138-3, 454 Case)	Response to February 12, 2007 Office Action (June 12, 2007)	Resp. to 1st Office Action
Chen Decl. Ex. C (Dkt. No. 138-4, 454 Case)	Response to July 19, 2007 Office Action (Nov. 19, 2007)	Resp. to 2d Office Action
Chen Decl. Ex. G (Dkt. No. 138-8, 454 Case)	U.S. Patent No. 8,274,902	'902 Patent
Chen Decl. Ex. H (Dkt. No. 138-9, 454 Case)	U.S. Patent No. 7,106,702	'702 Patent
Second Chen Decl. Ex. M	Additional Excerpts of the Expert Report of Dr. Stan McClellan - Infringement of U.S. Patent No. 7,366,160 By Microsoft Corporation (Feb. 1, 2022)	McClellan 160 Inf. Rept.
Second Chen Decl. Ex. N	Additional excerpts of the Expert Report of Mark Coates Ph.D. Regarding the Invalidity of U.S. Patent Nos. 7,366,160 (Feb. 1, 2022)	Coates 160 Invalid. Rept.
Second Chen Decl. Ex. O	Excerpts of the Expert Report of Mark Coates Ph.D. Regarding the Invalidity of U.S. Patent Nos. 8,274,902 (Feb. 1, 2022)	Coates 902 Invalid. Rept.
Second Chen Decl. Ex. P	Excerpts of the Expert Report of Dr. Stan McClellan Regarding Validity of U.S. Patent 8,274,902 (Feb. 1, 2022)	McClellan 902 Valid. Rept.

TABLE OF ABBREVIATIONS

Dkt. No.	Document Name	Document Abbreviation
Dkt. No. 138 (454 Case)	Microsoft's Motion for Summary Judgment of Patent Ineligibility of the Asserted Claims in U.S. Patent Nos. 7,366,160, 8,274,902, and 7,106,702	MS Br.
Dkt. No. 157 (454 Case)	WSOU's Opposition to Defendant Microsoft Corporation's Motion for Summary Judgment of Patent Ineligibility of the Asserted Claims of U.S. Patent Nos. 7,366,160, 8,274,902, and 7,106,702	Opp.

I. INTRODUCTION

The asserted claims of **U.S. Patent Nos. 7,366,160** and **8,274,902** are patent ineligible. The claims, even as recast in WSOU’s opposition, involve nothing more than collecting data, performing mathematical operations using the data, and producing more data. WSOU repeatedly calls the claims “technological,” but labels do not change their fundamental nature. “A process that started with data, added an algorithm, and ended with a new form of data [is] directed to an abstract idea.” *RecogniCorp, LLC v. Nintendo Co.*, 855 F.3d 1322, 1327 (Fed. Cir. 2017). Similarly, the asserted claims of **U.S. Patent No. 7,106,702** are directed to implementing a back-up system and claim the abstract idea of using some (but not all) of a network’s devices as backups. As to all three patents, WSOU notes that the claims are limited to particular “network” or “computer” environments (*see* Opp., 6-7, 13-14, 19-21), but it has long been settled that abstract concepts do not become patent-eligible merely because they are deployed only in particular contexts. *See, e.g., Intellectual Ventures I LLC v. Capital One Bank (USA)*, 792 F.3d 1363, 1366 (Fed. Cir. 2015); *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1168-69 (Fed. Cir. 2018). As the intrinsic records of the patents demonstrate, the claims do not require “significantly more” than the abstract ideas. This Court should grant summary judgment that all asserted claims are patent-ineligible.

II. THE ’160 PATENT’S CLAIMS ARE NOT PATENT ELIGIBLE.

A. The ’160 Patent Claims an Abstract Idea.

The asserted claims of the ’160 Patent are directed to abstract mathematical operations and data analyses. That is clear from WSOU’s own characterization of the invention: per WSOU, the patent provides “tools for accurately forecasting performance of a network service based on service trends” (Opp., 1, 5, 9), and the patent explains that its claimed advance is based on the ability to perform a trend “calculation” (’160 Patent, 1:16-17). The prosecution history

highlights the abstract nature of the claims—the patentee distinguished the invention from the prior art based on the determination of data as a function of a trend.¹ WSOU cannot and does not dispute that determining a trend and determining data as a function of a trend are abstract mathematical operations. *See Parker v. Flook*, 437 U.S. 584, 585-86, 594-95 (1978) (holding a method of updating “alarm limits” with an algorithm abstract); *see also FairWarning IP v. Iatric Sys., Inc.*, 839 F.3d 1089, 1093-95 (Fed. Cir. 2016) (collecting and analyzing information to determine a result is abstract).

WSOU contends that the asserted claims improve the functioning of a network or computer hardware (Opp., 2, 8), but the claims say nothing of the kind, and WSOU itself admits that the claims simply provide a “framework by which data and parameters are formulated into model-based service indicators” (*id.*, 3). That is, the claims provide for collecting data and manipulating that data using mathematical operations—for example, “calculating” or “extrapolating”—to produce more data. The patent makes that clear. (*See, e.g.*, ’160 Patent, 2:60-61 (“One or more *trends extrapolated* from measurements of a parameter can also be used in the definition of the indicator.”); 3:3-4 (“Parameters that have been *calculated or extrapolated* from measurements can therefore be used.”) (emphases added).) Whether or not the resulting data are “required by a service provider” (Opp., 3) or can be used to improve a network is irrelevant because the claims say nothing about the use to which the data are put (*see* MS Br., 2-3). The ’160 Patent does not claim a method for determining the “strategic effectiveness” of a service, nor does it provide “a specific improvement in the functioning of computer networks.”

¹ *See, e.g.*, Resp. to 2nd Office Action, 3-4. The prosecution history focuses on Claim 1, the sole independent claim. As explained in Microsoft’s opening brief (MS Br., 8-9) and below, the remaining asserted claims simply apply the abstract idea of Claim 1 in a specific technological context or describe additional mathematical operations or generic computer components.

(Opp., 3-4.) It provides for nothing more than manipulating data to produce more data, and that is abstract and not patentable. *See RecogniCorp, LLC*, 855 F.3d at 1327.

The intrinsic record makes clear that this data manipulation is the key to the claimed invention. During prosecution, the patentee admitted that the prior art disclosed all of the limitations of Claim 1 *except* those that involved determining, and using, a mathematical trend. (MS Br., 5.) The patentee further explained that the distinction between the prior art and the invention—a distinction that highlights the subject matter of the claims—was the mathematical operation of “*determining as a function of the trend of the indicator a time of the service indicator crossing a defined threshold.*” (Resp. to 1st Office Action, 6-7 (emphasis added); *see also* Resp. to 2d Office Action, 4 (“Clark [(the prior art)] does not disclose determining a time that a service indicator will cross a defined threshold as a function of the trend of the indicator.” (emphasis omitted)).) That the claims are directed to mathematical operations and data analyses is, therefore, unsurprising—it is what patentee told the PTO he invented. WSOU’s expert, Dr. McClellan, agrees that the claims are directed to abstract data analyses. He opines that the ’160 Patent describes the “conceptual approach” of using data “in determining inferences and trends related to *abstract* functions of data.” (McClellan 160 Inf. Rept., ¶25 (emphasis added).)

WSOU argues that the ’160 Patent is analogous to the patent at issue in *Amdocs*. (Opp., 7.) But although those claims deployed some generic components, they required that those “components operate in an unconventional manner,” and that they be used “in an unconventional distributed fashion to solve a particular technological problem.” *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1300-301 (Fed. Cir. 2016). In contrast, here, there is no “unconventional” use of anything. There are only generic components used in an entirely

conventional manner to gather data for mathematical operations and data analyses. There is *no* technological solution, conventional or otherwise.

Finally, WSOU's reliance on Microsoft's expert is also misplaced. (Opp., 5.) Dr. Coates opined that the asserted claims would have been obvious, and therefore *not* an improvement as of the date of the invention. (*See* Coates 160 Invalid. Rept., ¶¶14-15 (concluding obviousness based on the motivations to combine cited in WSOU's opposition).) Dr. Coates did not "agree" that the asserted claims were directed to "improve[d] network management" by the invention date (Opp., 5); if anything, his opinion shows that they were entirely conventional.

B. The '160 Patent Claims Do Not Include an Inventive Concept.

The asserted claims also do not disclose an inventive concept. The patentee admitted that the limitations of Claim 1 that do not involve abstract mathematical operations—(1) "selecting two or more parameters," (2) "measuring and/or calculating" the values of the parameters at multiple times, (3) "determining" a "service indicator" value based on the parameter values—were all known in the prior art. (MS Br., 5, 9.) Specifically, the patentee explained during prosecution that the prior art Clark reference taught all of the non-mathematical claim limitations in their claimed order, namely (1) "a quality of service monitor . . . which selects at least two parameters," (2) that "[t]he parameters are measured at regular and frequent intervals," and (3) that "[a] service indicator (voice quality) is estimated at regular intervals based on the determined parameters." (Resp. to 1st Office Action, 6.) There is no "micharakteriz[ation]" of the prosecution history here (Opp., 10)—the patentee admitted a "service indicator" was prior art, and it is undisputed that steps required for the "collection[] of those [network] parameters into service indicators" were routine and known by the time the '160 Patent was filed (Opp. 11).

Indeed, WSOU’s Dr. McClellan even opines² that no distinction exists between a “service indicator” and the admittedly-conventional “network parameters.” The dependent claims do nothing more than apply mathematical operations in a particular field (Claim 2) or describe additional mathematical operations (Claims 4-5, 10-11) or generic components (Claim 12), none of which makes the claims non-abstract. *See Intellectual Ventures I*, 792 F.3d at 1366 (field limitations cannot salvage abstract claims); *PersonalWeb Techs. LLC v. Google LLC*, 8 F.4th 1310, 1317-18 (Fed. Cir. 2021) (adding one abstract idea to another is not patentable); *In re TLI Commc’ns LLC Patent Litig.*, 823 F.3d 607, 612 (Fed. Cir. 2016) (reciting generic physical components is not sufficient).

The asserted claims are not patent eligible. They are directed to abstract mathematical operations and data analyses, and when considered as a whole they do not disclose “significantly more.” *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 573 U.S. 208, 217-18 (2014).

III. THE ’902 PATENT’S CLAIMS ARE NOT PATENT ELIGIBLE.

A. The ’902 Patent Claims an Abstract Idea.

The asserted claims of the ’902 Patent are directed to the abstract idea of using an algorithm to estimate packet loss rates. (MS Br., 14.) Asserted Claim 1 (an independent claim) contains two steps. As WSOU admits, the first step calls for “collecting data on downstream packet losses at a single collection point.” (Opp., 14.) This is conventional, as the patent explains, because “[m]onitoring devices that can gather information from diverted packets . . . are *well known and need not be described here in detail.*” (’902 Patent, 2:55-59 (emphasis

² McClellan 160 Inf. Rept., ¶72 (“In addition, the Court declined to adopt Microsoft’s alternative interpretation that whatever is identified as satisfying the ‘network parameters’ term cannot also satisfy the ‘service indicator’ element. I note that in certain disclosed embodiments of the ’160 patent, a ‘service indicator’ may simply be a collection of ‘network parameters.’”).

added).) It is also abstract. *See, e.g., TDE Petroleum Data Sols., Inc. v. AKM Enters., Inc.*, 657 Fed. App'x 991, 993 (Fed. Cir. 2016) (data gathering and processing is an abstract idea). The second step requires “estimating packet loss rates” on downstream portions of the network (Opp., 14) using a mathematical algorithm (*see* MS Br., 15). Claim 6, the other independent claim, and Claim 2, which depends on Claim 1, simply describe performing the steps of Claim 1 on generic hardware (*e.g.*, a “circuit”). Each of these claims is thus directed to the same abstract idea—an algorithm for estimating packet loss rates.

WSOU contends that the “collecting” and “estimating” steps when read as a whole describe a technological solution to a technological problem. (*See* Opp., 14; *see also id.*, 12-13, 15.) But reading the claims as a whole only highlights that they are directed to nothing more than an abstract idea. As noted above, Claim 1’s first step requires collecting data, and the second step requires inputting the data into estimation algorithms (including, but not limited to, those described in the specification). Applying estimation algorithms to collected data is an unpatentable abstract idea, and WSOU does not contend otherwise. Indeed, the fact that the claims require the result of “estimation,” without describing a technological process for achieving that result, confirms they are directed to an abstract idea. *See Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1241 (Fed. Cir. 2016) (claims abstract because “[t]hey do not claim a particular way of programming or designing the software” “but instead merely claim the resulting systems”); *SAP*, 898 F.3d at 1168 (describing abstract claims as “claiming only a result”); *Free Stream Media Corp. v. Alphonso Inc.*, 996 F.3d 1355, 1363-64 (Fed. Cir. 2021) (claims abstract because they “do not at all describe how [a] result is achieved”).

The results-based nature of the claims distinguishes them from the patent-eligible claims in *Enfish* and *Finjan*. (Opp., 16.) In *Enfish*, the claims did not simply claim a better database.

They claimed a non-conventional, self-referential table which improved database performance.

See Enfish, LLC v. Microsoft Corp., 822 F.3d 1327, 1330, 1333, 1336 (Fed. Cir. 2016).

Similarly, in *Finjan*, the claims did not simply claim the result of improved computer virus detection. They claimed a specific, non-conventional “behavior-based” approach to virus detection. *See Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1304-305 (Fed. Cir. 2018).

Here, unlike *Enfish* and *Finjan*, no limitation (conventional or otherwise) describes the implementation of the “estimating” step.

Finally, it is WSOU, not Microsoft, who improperly “dissect[s] the claims.” (Opp., 15.) Contrary to what WSOU contends, the ’902 Patent does not assert that a “single collection point” or monitoring “specific data paths” is inventive. (*Id.*) Instead, these steps simply gather data for the estimation algorithms. (*See, e.g.*, ’902 Patent, Figs. 4 & 6; 2:10-17.) As patent’s title makes clear, the invention is to an “Estimation Method for Loss Rates in a Packetized Network” (*id.*, Title), and not to methods of data collection or monitoring. The claims reflect that focus.

B. The ’902 Patent Does Not Describe an Inventive Concept.

Beyond their “estimating” step, the ’902 Patent’s asserted claims recite only using known devices for collecting packet loss data on a conventional network. (*See MS Br.*, 16-17.)

WSOU’s assertion that prior art estimation approaches were limited to “nonstandard network deployments” is incorrect. (Opp., 17.) The prior art demonstrates that the known techniques were designed for situations in which a private network operator could not monitor all portions of the public Internet, and thus would benefit from determining an estimated performance of non-monitored portions. (*See Coates 902 Invalid. Rept.*, ¶¶100-103.)

Finally, WSOU dodges the central tenet of its own expert’s testimony when characterizing the supposed advance of the asserted claims. Contrary to WSOU, Dr. McClellan does not opine that the claimed techniques differ from the prior art because the prior art functions

only on “mathematical abstractions of the network architecture” or “abstractions” that are “not representative of realistic network architectures.” (Opp., 17.) Instead, Dr. McClellan opines that the ’902 Patent is *broad*er than (and encompasses) the prior art. As explained in his report, “the patented technology is not only *broad*er than the . . . references which are claimed as prior art, it is applicable to *any network structure*” (McClellan 902 Valid. Rept., ¶76 (emphasis added)), including those deemed abstract and unrealistic.

In short, there is no genuine factual dispute between the parties. The asserted claims are directed to abstract methods for estimating packet losses, and when considered as a whole, the claims do not disclose “significantly more” than—and, in fact, encompass—conventional prior art techniques for estimating packet losses. *Alice*, 573 U.S. at 217-18.

IV. THE ’702 PATENT’S CLAIMS ARE NOT PATENT ELIGIBLE.

A. The ’702 Patent Claims an Abstract Idea.

The asserted claims of the ’702 Patent are directed to the abstract idea of activating a back-up system to perform AAA functions in a wireless network. (MS Br., 17.) Asserted Claim 1 describes a method for activating a back-up AAA node that involves a series of abstract and generic “selecting,” “activating,” “monitoring,” and “informing” steps performed on a conventional network with prior art AAA nodes. (*Id.*, 21-22.) Claim 11, the other asserted independent claim, recites known and generic hardware configured to perform Claim 1’s method on a conventional network. (*Id.*, 23.) The dependent claims describe either additional abstract ideas (*e.g.*, monitoring) or the use of additional conventional computer components (*e.g.*, a user database). (*Id.*, 22-24.) Each asserted claim is directed to the abstract idea of activating a back-up system to perform AAA functions in a wireless network.

WSOU contends that the ’702 Patent is not abstract because it teaches the “solution” of “maintaining high reliability” “so that one or more back-ups may take over when functions

and/or resources are lost due to failure or otherwise.” (Opp., 18.) Common sense shows that this is a non-technological solution to an age-old problem—humans have long used the solution (“one or more back-ups”) to address the problem (“maintaining high reliability”). For example, backup power systems have long been designed to take over when the primary power systems fail. (MS Br., 1.) Even if the specification describes a technological problem (Opp., 18-19), the abstract idea of using back-ups is not a patent-eligible solution.

That the asserted claims contain “specific, detailed steps” (Opp., 19) does not save them. The problem here is not the use of functional language (*see* Opp., 8), but rather that the “specific, detailed steps” do no more than state “functions in general terms, without limiting them to technical means for performing the functions that are arguably an advance over conventional computer and network technology.” *Electric Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1351 (Fed. Cir. 2016). Specifically, WSOU contends that it is “significant” that “nodes are monitored, and if an active node becomes ‘disconnected’ from the network, an inactive node is selected, activated, and begins providing the AAA function.” (Opp., 20.) But like the patent-ineligible claims in *Electric Power*, the asserted claims do not describe how to perform any of the “monitoring,” “selecting,” or “activating” steps. *See also Ameranth*, 842 F.3d at 1241 (claiming a feature or function but not a specific way of providing or performing that feature or function is an abstract idea); *SAP*, 898 F.3d at 1168 (same); *Free Stream*, 996 F.3d at 1363-64 (same). The asserted claims, in short, are directed to nothing more than the abstract idea of activating a back-up system to perform AAA functions in a wireless network.

B. The ’702 Patent Does Not Describe an Inventive Concept.

As WSOU itself explains, the claims are directed to the common-sense solution of having “one or more back-ups [] take over when functions and/or resources are lost due to failure or otherwise.” (Opp., 18.) The claims read as a whole do not add “significantly more” to this

abstract idea. Each of the “selecting,” “activating,” “monitoring,” and “informing” limitations in the asserted independent claims (Claims 1 and 11) is entirely generic, and when performed together their purpose is to implement the abstract idea of activating a back-up system. (MS Br., 24.) The additional limitations in the dependent claims simply add additional abstract ideas or conventional techniques or components (*id.* at 25), and that does not make them patentable (*supra*, p. 8).

WSOU attempts to create a factual dispute by dodging the teaching of the ’702 Patent. Dr. McClellan, WSOU’s expert, understands there to be something distinct about “the AAA function” in the ’702 Patent. (Opp., 22.) But that is not what the patent teaches. The patent explains that AAA functionality is prior art, and that the distinction between “the AAA function” in the patent and in the prior art is only that, in the ’702 Patent, some (not all) AAA nodes are used as active backups. (*See* ’702 Patent, 3:13-31.) This is exactly the abstract idea. Furthermore, an admitted prior art system (where all nodes are active backups) is an AAA function-capable system that is an “integrated whole, implemented within a distributed network.” (’702 Patent, 1:40-50; Opp., 22.) To the extent the “managing,” “monitoring,” or “provisioning” mentioned by Dr. McClellan provides “something more,” it is not recited in the asserted claims.

The asserted claims are directed to the abstract idea of activating a back-up system to perform AAA functions in a wireless network. The claims do not disclose “significantly more” than that. *Alice*, 573 U.S. at 217-18. The asserted claims are thus patent ineligible.

V. CONCLUSION

Because the asserted claims in the ’160 Patent, ’702 Patent, and ’902 Patent are directed to patent-ineligible subject matter, this Court should enter judgment for Microsoft.

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Respectfully submitted,

/s/ Richard A. Cederoth (by permission)

Melissa R. Smith, Bar No. 24001351
melissa@gillamsmithlaw.com
James “Travis” Underwood, Bar No.
24102587
travis@gillamsmithlaw.com
GILLAM & SMITH, LLP
303 South Washington Avenue
Marshall, Texas 75670
Tel: (903) 934-8450
Fax: (903) 934-9257

Michael J. Bettinger
mbettinger@sidley.com
Irene Yang
irene.yang@sidley.com
Brooke S. Boll
brooke.boll@sidley.com
SIDLEY AUSTIN LLP
555 California Street, Suite 2000
San Francisco, CA 94104
Tel: (415) 772-1200
Fax: (415) 772-7400

Richard A. Cederoth
rcederoth@sidley.com
John W. McBride
jwmcbride@sidley.com
Richard M. Chen
rchen@sidley.com
Kevin Robert Oliver
kevin.oliver@sidley.com
SIDLEY AUSTIN LLP
1 South Dearborn St.
Chicago, IL 60603
Tel: (312) 853-7000
Fax: (312) 853-7036

**ATTORNEYS FOR MICROSOFT
CORPORATION**

CERTIFICATE OF SERVICE

I, Richard M. Chen, certify that on May 3, 2022 this document and related exhibits (unless previously-filed or non-confidential) were filed under seal with the Clerk of Court via the Court's CM/ECF system. This documents and the applicable exhibits were subsequently served on all counsel of record by electronic mail.

DATED: May 3, 2022

/s/ Richard M. Chen

Richard M. Chen
rchen@sidley.com
SIDLEY AUSTIN LLP
1 South Dearborn St.
Chicago, IL 60603
Tel: (312) 853-7000
Fax: (312) 853-7036

***ATTORNEY FOR MICROSOFT
CORPORATION***